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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,869	12/14/2005	David Nurok	29920-79201	3698

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Indianapolis, IN 46204

EXAMINER	
ZALASKY, KATHERINE M	
ART UNIT	PAPER NUMBER
1797	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/560,869	NUROK ET AL.	
	Examiner	Art Unit	
	KATHERINE ZALASKY	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

4a) Of the above claim(s) *10-33 and 35-47* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-47, as amended 13 February 2009, are currently pending. **Claims 10-33 and 35-47** are withdrawn.

Claim Rejections - 35 USC § 103

1. **Claims 1-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mincsovics et al. (WO 01/50123, as translated by US 2003/0019816).

Regarding **claim 1**, Mincsovics et al. discloses a method of performing electrochromatography (abstract, [0071]-[0072]), the method comprising the steps of:

- urging a die block toward a stationary phase (Figure 2, [0047], die block is rigid support 3, stationary phase 2) so as to exert a pressure which is greater than atmospheric pressure against the stationary phase ([0047], Figure 2)
- creating an electrical potential across the stationary phase with a first electrode and a second electrode so as to cause a liquid mobile phase to be advanced across the stationary phase ([0071]-[0072])

Mincsovics does not explicitly disclose that the stationary phase is supported on a sample plate. However, commercially available planar sorbents are very commonly supplied on a sample plate and it is well known in the art to form a sorbent on a sample plate for planar chromatography (as evidenced by Nurok et al., US 6,303,029, C1/L61-63). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention use a sorbent supported on a sample plate as opposed to just a sorbent layer in the method of Mincsovics et al. since doing so amounts to nothing more

than the simple substitution of one known element for another to yield predictable results. Further, a sample plate will provide more structural support for the sorbent layer.

Regarding **claim 2,** modified Mincsovics discloses all of the claim limitations as set forth above. Additionally, the reference discloses the method further comprising the step of placing the stationary phase in contact with the liquid mobile phase prior to the creating step ([0072], pre-wetting step).

Regarding **claim 3**, modified Mincsovics discloses all of the claim limitations as set forth above. While the reference does disclose that the die block is rigid ([0038]), the reference does not disclose the process wherein urging the die block toward a stationary phase supported on the sample plate comprises urging a metal die block toward the stationary phase supported on the sample plate. However, it would have been obvious to one having ordinary skill in the art at the time of the invention to choose a metal support from a finite number of predictable solutions for rigid supports in the method of modified Mincsovics.

Regarding **claims 4-8**, modified Mincsovics discloses all of the claim limitations as set forth above. Additionally, the reference discloses the method:

- further comprising the step of positioning the sample plate in a plate holder prior to the urging step (Figure 2, [0038], rests on support 3, in chamber 1)
- wherein the urging step comprises urging the die block with a fluid ram ([0047]-[0048])

- wherein the urging step comprises urging the die block with a hydraulic ram ([0047]-[0048])
- further comprising the step of positioning a cover slip over the sample plate prior to the urging step (Figure 2, [0041], film 8 is placed over the thin layer)
- wherein the urging step comprises urging the die block into contact with the sample plate ([0044]-[0049])

Regarding **claim 9**, modified Mincsovics discloses all of the claim limitations as set forth above. The reference does not explicitly disclose that the stationary phase is supported on a first side of the sample plate, and the urging step comprises urging the die block into the first side of the sample plate. However, as there are only two possible orientations for the sample plate with sorbent in the chamber of modified Mincsovics, it would have been obvious to one having ordinary skill in the art to choose to place the sorbent side toward the die block (rigid support 3) from a finite number of predictable solutions for ways to configure the sample plate in the chamber.

2. **Claim 34** is rejected under 35 U.S.C. 103(a) as being unpatentable over Mincsovics et al. (WO 01/50123, as translated by US 2003/0019816), as applied to **claim 1** above, and further in view of Nurok et al. (US 6,303,029) and Tyihák et al. (US 4,346,001).

Regarding **claim 34**, modified Mincsovics discloses all of the claim limitations as set forth above. While the reference does disclose that pressurized fluid flows beneath the die block (rigid support 3, [0047]), the reference does not disclose the method

further comprising the step of advancing a fluid through a number of fluid channels defined in the die block.

Nurok et al. discloses a method for performing electrochromatography by applying pressure to a thin-layer chromatography plate (abstract). Pressurized fluid is delivered to a bladder within a chamber which applies pressure to the chromatography plate (C13/L12-39). The reference teaches that this arrangement places the fluid in a heat exchange relationship with the plate (C13/L30-39).

Tyihák et al discloses a method for performing overpressured thin layer chromatography (abstract). The reference teaches that the support in contact with the chromatography plate may have a hollow space in order to regulate the temperature required for the chromatographic separation (C4/L11-14, Figure 1).

Mincsovics et al., Nurok et al. and Tyihák et al. are analogous because all references are directed to overpressurized planar chromatography.

It would have been obvious to one having ordinary skill in the art at the time of the invention to provide fluid channels within the rigid support in the method of modified Mincsovics to allow the pressurized fluid to flow within the channels, as taught by Nurok et al. and Tyihák et al., since doing so will create a heat exchange relationship between the rigid support and the chromatography sorbent and allow the user to regulate the temperature during the separation.

Response to Arguments

3. Applicant's arguments with respect to the rejection of **claims 1-9 and 34** under 35 U.S.C. §102 have been considered but are moot in view of the new ground(s) of rejection.

4. Applicant's arguments, see page 21, filed 13 February 2009, with respect to the double patenting rejections have been fully considered and are persuasive. The double patenting rejection of **claims 1, 2, 5, and 6** has been withdrawn.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATHERINE ZALASKY whose telephone number is (571) 270-7064. The examiner can normally be reached on Monday-Thursday, 7:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on (571)272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KZ/
10 April 2009

/Krishnan S Menon/
Primary Examiner, Art Unit 1797